Verrucous Hemangioma

Sir,

Verrucous hemangioma (VH) is characterized by hemangioma from the dermis to the subcutaneous tissue and proliferative reaction of the epidermis. This is sometimes confused with angiokeratoma circumscriptum neviforme (ACN), but it is considered that hemangioma of angiokeratoma is located in the dermal papilla, whereas VH extends into the subcutis. Here we report a case of VH, clinically resembling verruca vulgaris and malignant melanoma.

CASE REPORT

An 8-year-old Japanese boy visited our department in April 1991, complaining of a black tumor on his right 3rd toe. The tumor had existed for more than 6 months, and had once been treated as a verruca vulgaris in another clinic, but it had rapidly recurred and was gradually increasing in size. When the patient came to our hospital, the tumor was black, 1.2 cm and 0.6 cm in diameter and height, respectively (Fig. 1). The surface was hyperkeratotic and hemorrhaged. Irregularly shaped pigmentation was also seen. No regional lymphnodes were palpable, and physical examination revealed no significant abnormalities. At this point, we diagnosed it as a verruca vulgaris, but the possibility of malignant melanoma was considered, since the tumor had quickly enlarged and was resistant to normal therapy such as cryosurgery. It was then decided that the boy was to be operated under the condition of total anesthesia.

Histological examination showed marked hyperkeratosis, acanthosis in the epidermis, and elongation of the rete ridges. In the dermis, a lot of lumen structures with endothelial cells were seen from the dermal papilla to the lower dermis, which contained many red blood cells. The lumina were also observed in the subcutaneous fat tissues (Fig. 2). The endothelial cells were positively stained by factor VIII related antigen using peroxidase-antiperoxidase technique (data not shown). Thus, these structures were considered dilated blood vessels. No atypical or malignant cells were seen in any of the sections. From these findings, we finally diagnosed this tumor as a verrucous hemangioma. The patient has been followed up without any other treatment; no evidence of recurrence has been found after the operation so far.

DISCUSSION

VH was firstly reported by Imperial & Helwig in 1967 (1). It presents as a single patch, sometimes with surrounding satellite lesions, and is mainly located on the inferior limbs. Clinical onset is usually near the time of birth or in early infancy. It is histologically characterized by vascular dilation and proliferation, which extends deep into the dermis and subcutaneous tissue. The overlying epidermis shows papillomatosis, acanthosis and hyperkeratosis of various degrees.

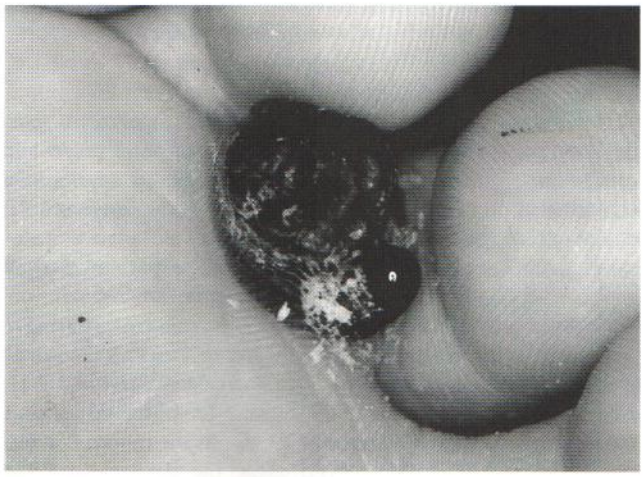

Fig. 1. Clinical aspect of the tumor.

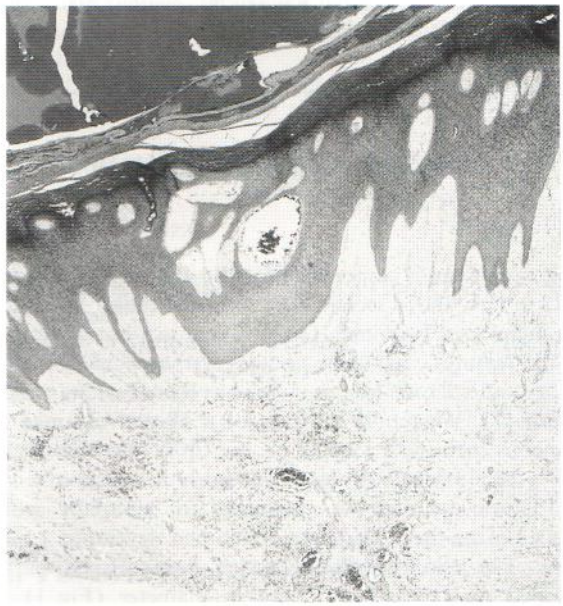

Fig. 2. Low magnification of the section. Marked hyperkeratosis and acanthosis are seen. A lot of blood vessels are observed in the dermis.

In 1990, Hamanaka et al. (2) summarized 21 Japanese cases. They mentioned in their report that the age of the patients ranged from 9 months to 53 years, with an average of 19 years. Most of the tumors were located on the lower limbs, with some exceptions: two on the flank, two on the forearm, and one in the inguinal region. These findings in Japanese cases are consistent with the description in textbooks.

VH is usually compared with ACN. Generally, VH is present at birth as a single nodule with satellite lesions, while ACN appears in infancy as small dotted elements.

It is sometimes difficult to distinguish VH from ACN, because of the similarity of the clinical and even the pathological features. But Rossi et al. (3) indicated that ACN was a hemangioma in the dermal papilla; VH, on the other hand, was present from the deep dermis to the subcutis. It is, therefore, important whether the hemangioma is present in the subcutaneous tissue for the diagnosis of VH. Since the hemangiomatous lesion of VH lies deep into the subcutis, this is sometimes recurrent despite surgical operation. It is important to differentiate this disease from angiokeratoma, for the prognostic implication.

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Accepted February 3, 1997.

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